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


































Categories: AIR / Bombs / Atomic bombs and charges / RN202 / product 202 (1957) /

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By the Resolution of the Council of Ministers of the USSR No. 46-31ss "On the results of testing the RDS-27 and RDS-37 products, serial production of the RDS-27 product, development and production of the product based on the principle of atomic compression" dated January 5, 1956, preparations were made for the production of high-power products in 1956-1960, as well as preparations for testing a product with a power of 20-30 Mt at the "700" facility (a testing ground on Novaya Zemlya) by the 3rd quarter of 1956. The corresponding M-4 carrier aircraft for the mass of the payload had to be ready by this date. Thus, the development of the future product 202 was assigned at NII-1011.



RDS-202 / RN202 bomb developed by NII-1011 (<https://ru.wikipedia.org/>)

-  AIR
 -  Bomber
 -  Fighters
 -  Transpo
 -  Special
 -  Helicop
 -  UAV
 -  Air-to-air
 -  Air-to-ground
 -  Aircraft
 -  Unguided
 -  Aircraft
 -  Bombs
 -  Atom
 -  Nuclear
 -  Threat
 -  RC
 -  RC
 -  precision
 -  RC
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 -  RC
 -  RM
 -  8U
 -  24
 -  40
 -  AN (19
 -  8U
 -  RY
 -  RM
 -  9U
 -  High (HEA)
 -  Aviation
-  EARTH
-  WATER
-  SPACE
-  Personaliti
-  News and

DISCUSSION



Model of the AN602 thermonuclear bomb and its parachute system in the museum (RN202 body)

KB-11 employees Sakharov, Zeldovich and Davidenko performed a preliminary calculation and on February 2, 1956, passed on to N. I. Pavlov a note (ssop) with an assessment of the possibility of creating "high-power" charges - 150 Mt and potentially more - up to 1 Gt of TNT equivalent. It was proposed to create two types of charges:

1. A product with lithium deuteride, 4 m in diameter, 8-10 m long, weighing about 100 tons;
2. A product with lithium and lithium-6, 6-7 m in diameter, 18-20 m long, weighing 500 tons.

On March 6, 1956, a draft Resolution of the Council of Ministers (ssov) was written by the head of the 6th Main Directorate of the USSR Ministry of Defense V.A. Bolyatko "On the preparation and testing of product 202 at facility 700 of the USSR Ministry of Defense". It was proposed to conduct an explosion of product 202 in the 3rd quarter of 1956 in the northern part of the Novaya Zemlya test site (Mityushikha Bay area). For the test, it was proposed to re-equip the Tu-95 aircraft instead of the M-4 aircraft. On March 12, 1956, Resolution of the Council of Ministers of the USSR No. 346-218ss "On the re-equipment of the Tu-95 aircraft for special purposes" was issued, which specified the re-equipment of the Tu-95K aircraft under development with the K-20 system for testing product 202.

On March 12, 1956, a draft joint Resolution of the Central Committee of the CPSU and the Council of Ministers of the USSR on the preparation and testing of product 202 was adopted. The project planned to develop a charge based on the principle of the RDS-37 product with a power of 30 Mt of TNT equivalent. The RDS-202 was designed with a maximum calculated energy release of 50 megatons, with a diameter of 2.1 meters, a length of 8 meters, a weight of 26 tons with a parachute system and structurally coordinated with the Tu-95-202 carrier aircraft specially re-equipped for its use.

On March 17, 1956, the USSR Council of Ministers adopted Resolution No. 357-228ss "On the preparation and testing of product 202 at facility 700 of the USSR Ministry of Defense", which set the stage for the preparation of product 202 testing on Novaya Zemlya by July 1956. The bomb was planned to explode at an altitude of 3-4 km after being dropped from an altitude of 10-11 km. The preparation of the experimental field was supposed to be by July 20, 1956. To study the consequences of the experiment, it was supposed to use Yak-25M, Il-28, Tu-16 aircraft, and Mi-4 helicopters.

On June 13, 1956, the Minister of Medium Machine Building A.P. Zavenyagin accepted the proposal of nuclear scientists to create "a new powerful product with a diameter of 1,600 mm, a length of 6,000 mm, with a total weight of about 9 tons with a full TNT equivalent of at least 10 million tons" ([source](#)). The R202E charge turned out to be significantly larger in size and weight than the RDS-6s and RDS-37. It required the development of a new ballistic body for the RN202 aerial bomb and a large parachute system capable of slowing the descent of the bomb after being dropped from an aircraft to the "critical altitude" (the altitude of the air burst) so that the carrier aircraft could move away to a safe distance. The dimensions of the bomb turned out to be so large that it was not possible to hang it even on the largest strategic aviation bomber, the Tu-95. In agreement with the design bureau of A.N. Tupolev modified one model of the Tu-95, which was assigned the index Tu-95-202. This model of the carrier with an external bomb suspension (instead of a bomb bay, a large extrusion with powerful bomb-holder locks was made at the bottom of the fuselage) was intended for testing the aerodynamics, ballistics of the aerial bomb and a unique parachute system (developed by the Research Institute of Parachute-Landing Equipment MAP). The testing was carried out by the Research Institute-1011 and the 71st Air Force testing ground (Bagerovo station, Crimean region). It apparently did not get to full-scale testing for three reasons: firstly, there was a moratorium on nuclear tests; secondly, a bomber with an external bomb suspension significantly lost speed and maneuverability and could become an excellent target for the air defense of a potential enemy; Thirdly, at the initial stage of the work of NII-1011 there were many serious blunders and even failures during the explosion of the nuclear charge. Most likely, further work was recognized as unpromising and suspended ([source](#) - Veselovsky).

On June 6, 1956, in the report of NII-1011 (ssov) signed by E.I. Zababakhin, the thermonuclear device RDS-202 (as in the document) weighing 25 tons, with an estimated yield of up to 38 Mt was described.

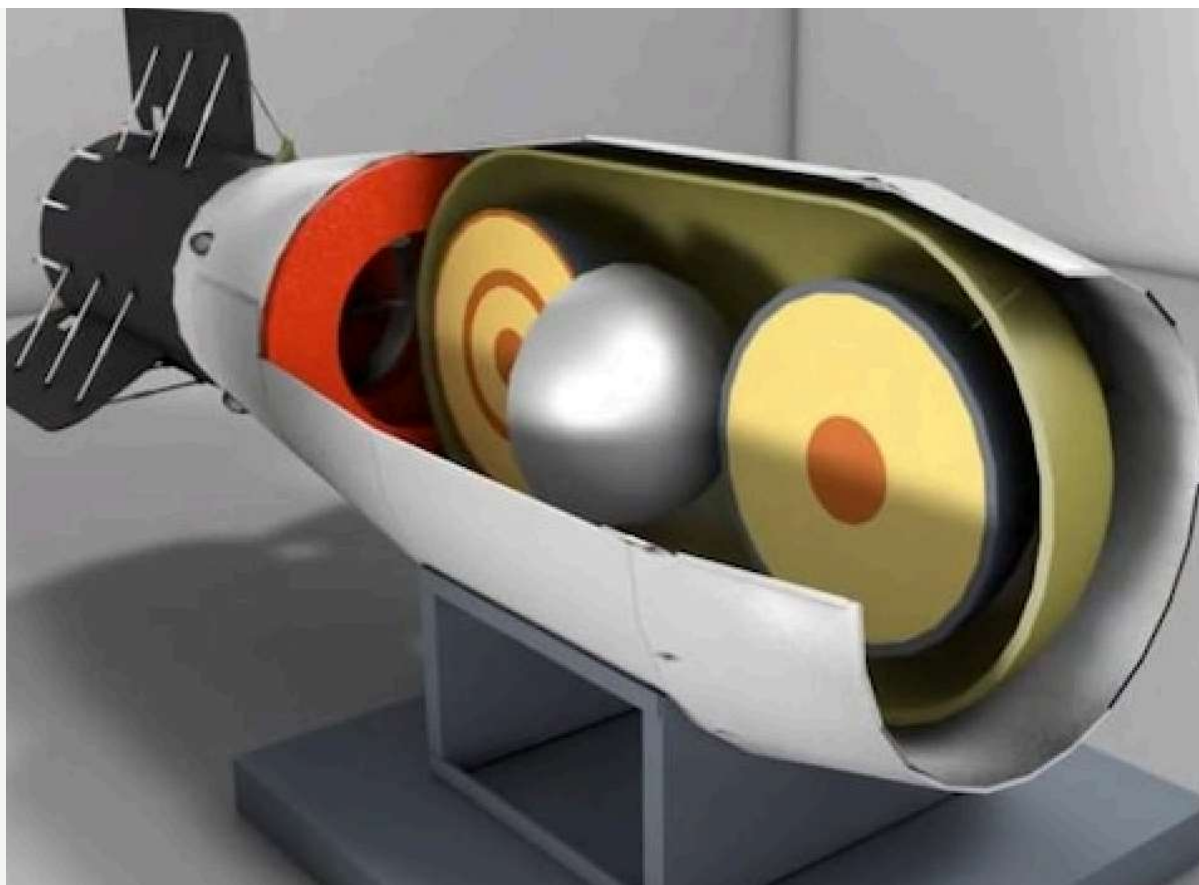
On June 23, 1956, a note from Zavenyagin, Zernov, Pavlov and Shchelkin (ssov) to the Central Committee of the CPSU questioned the testing of a high-power bomb - they say that when using parachutes, the enemy can shoot the bomb before it falls. At the same time, it was stipulated that the tests could have a positive effect in terms of propaganda of the achievements of the USSR. The final part of the letter proposed testing and stipulated the readiness of the product after August 15, 1956. On

August 29, 1956, a letter from Zavenyagin, Vannikov and Zernov to the Central Committee of the CPSU reported that product 202 was ready for testing with a yield of 15 Mt. Testing of the parachute system was proceeding satisfactorily (not without problems due to the mass of the product). Testing of product 202 on Novaya Zemlya was possible in October 1956. Permission was requested to postpone the testing until the spring of 1957. The proposals to postpone the testing were supported by the Central Committee of the CPSU.

On May 16, 1957, the First Deputy Chairman of the Council of Ministers of the USSR M.G. Pervukhin and the Minister of Defense G.K. Zhukov sent a letter to the Presidium of the Central Committee of the CPSU (ssov) raising the issue of canceling the testing of product 202. After testing products "40GN", "245" and "205", the tests of product 202, in the opinion of the authors of the letter, do not provide new scientific data. At the same time, possible damage to Norway is noted. Do not conduct tests. Use the materials of the product for other products.

The Resolution of the Central Committee of the CPSU and the Council of Ministers of the USSR on the cancellation of the testing of product 202 and its transfer to experimental storage is adopted on May 27, 1957. Later, on July 18, 1958, a decision is made to remove it from storage, dismantle and use the automation units and parts of the charge for experimental work.

The RDS-202 was assembled on the principle of radiation implosion (atomic compression), previously tested during the creation of the RDS-37. Since it used a much heavier main energy-producing module than the RDS-37, its compression was performed using not one but two primary modules (charges), located on two opposite sides of this much heavier main energy-producing module. This physical charge scheme was later used in the design of the AN602 "Tsar Bomba" charge, but the AN602 thermonuclear charge (the main energy-producing module) itself was new. The RDS-202 thermonuclear charge was manufactured in 1956 and planned for testing in 1957, but was not tested in 1957.



Schematic diagram of the RDS-202 bomb charge device (<https://steamcommunity.com/>)

Bomb design - the design of the aerodynamic body of the RN202 / 02N bomb was developed at NII-1011 under the supervision of V.F. Grechishnikov. Development of the body began in 1954 and was completed in 1957 with the production of a limited series of samples. A special multi-cascade parachute system was developed for the bomb - the developer - the Moscow Specialized Research Institute of Parachute-Landing Equipment (NII PDS). The system was tested at testing ground No. 71 of NII-1011. In the fall of 1957, work on the RN202 product was generally completed.

Full-weight mock-ups without special equipment under the designation "Concrete" were used to test the aerial bomb and parachute system.

Performance characteristics of the RN202 bomb with a charge of 202 :

Length - 8 m
Diameter - 2 m
Weight - 25 tons
Actual yield - 15 Mt / 20 Mt (maximum for tests)
Design yield - 38 Mt / 50 Mt (maximum theoretical)

Drop altitude - 10,500 m

Carriers :

- M-4 - was considered as a carrier in the early stages of the project.
- Tu-95-202 - a modification of the Tu-95K specially prepared for bomb testing.

Status: USSR - the munition was created as an experimental one and was not produced in series.

1961 - RN202 bomb bodies for the NII-1011 charge were used to prepare the AN602 bomb. Six RN202 bomb bodies for the R202E charges were taken from the NII-1011 warehouses in Chelyabinsk-70. The parachute system for the bombs was manufactured by the Moscow Research Institute of Parachute Systems. The Tu-95-202 carrier aircraft was at the Long-Range Aviation airfield in Engels awaiting disposal. Urgent measures had to be taken. The aircraft was returned from the decommissioned category to service, the engines were replaced, a full revision of the power structures, electrical and radio equipment was carried out, and repair and restoration work was carried out. After conducting training flights on it, the Tupolev Design Bureau issued a conclusion on its suitability for combat work.

Sources:

The USSR Atomic Project: Documents and Materials: [in 3 volumes] / Under the general editorship of L. D. Ryabev. — 1998-2010. Vol. 3. Hydrogen Bomb, 1945-1956. Book 2 / State Atomic Energy Corporation Rosatom; compiled by: G. A. Goncharov (responsible compiler), P. P. Maksimenko. — 2009.
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